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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (Previously presented): A system that facilitates maintaining an item, comprising:

a first data store that stores the item in an active state;

a second data store that stores the item in an archived state; and

an inference system that inferentially determines whether to store the item in an active or archived state based at least in part upon information related to at least one of: a property of the item, a property of a user and extrinsic data.

2. (Previously presented): The system of claim 1 further comprising:

a property log that stores as evidence at least one of: information related to a property of the item, a property of a user and extrinsic data, the inference system consults the property log when making an inferential determination.

3. (Original): The system of claim 2, the inference system further basing determinations upon a probability of user access to the item.

4 (Previously presented): The system of claim 3 wherein at least one of: a property of the item, a property of a user and extrinsic data undergo probabilistic computations to ascertain a probability of user access.

5. (Original): The system of claim 4, the inference system further basing determinations upon a value density of the item.

-2-

6. (Original): The system of claim 5 wherein the value density can be stated as the probability of user access given evidence divided by the size of the item and which can be defined as:

$$value\ density = \frac{p\ (access\ |\ E)}{item\ size}$$

7. (Previously presented): The system of claim 6 wherein the inference system determines whether the item should be regarded as a one-shot item based upon at least one of: a property of the item, a property of a user, extrinsic data, a determined probability and value density.

8. (Previously presented): The system of claim 7 stores a one-shot item in an archived state after it is accessed.

9. (Canceled)

10. (Previously presented): The system of claim 1 further comprising:

a learning system that acts upon the inference system and modifies inferences made thereby based upon at least one of: a property of the item, a property of a user, extrinsic data, a determined probability and a value density.

11. (Original): A utility based item archiving system comprising:

means for determining the utility of an item; and

means for inferring whether to store as active or archive the item based upon the determined utility of the item.

12. (Original): The system of claim 11 wherein probabilistic techniques are utilized to determine the utility of the item.

13. (Original): The system of claim 12 being temporally sensitive such that a determined utility of an item and storage inferences drawn therefrom are continually updated over time.

14. (Original): The system of claim 13 further employing a cost-benefit analysis means to determine whether to actively store the item.

15. (Original): The system of claim 14 wherein the cost-benefit analysis means yields a value density that is a measure of item utility versus size.

16. (Original): The system of claim 15 wherein a knapsack packing analysis is employed to determine how to store the item.

17. (Original): The system of claim 16 wherein, when more than one item exists, the knapsack packing analysis considers respective value densities of items to determine which items to store as active and which items to archive.

18. (Previously presented): A method for determining how to store items comprising:
    determining respective item utilities through probabilistic computations;
    determining respective value densities of the items based upon determined probabilities of item access and item sizes; and
    inferring whether to store actively, archive or discard items based upon at least one of: the determined probabilities and the value densities.

19. (Previously presented): The method of claim 18 further comprising:
    updating determined item utilities over time;
    determining modern value densities based upon updated item utilities; and
    making contemporary inferences from at least one of: the temporally adjusted probabilities and value densities.

- 4 -

20. (Original): The method of claim 19, when more than one item is present, further including:

    mitigating inefficient use of active space by applying a knapsack computation to the modern item value densities.

21. (Previously presented): A method of streamlining actively stored items comprising:

    removing items from an active item store when at least one of: determined item utilities and value densities fall below a predetermined threshold.

22. (Original): The method of 21 furthering comprising:

    removing one-shot items from an active item store after being accessed a first time.

23. (Original): A computer-readable medium storing computer-executable instructions adapted to perform the method of claim 18.

24. (Previously presented): A system adapted to infer how to store an item comprising:

    a probability component adapted to determine a probability that the item will be accessed;

    a cost-benefit component adapted to determine a value density of the item as a function of the determined probability and the size of the item; and

    an inference system adapted to infer whether to store the item in an active or archive item store based upon at least one of: the determined probability and the value density.

25. (Original): The system of claim 24 wherein the probability component is adapted to determine the probability based upon at least one of: information related to a property of the item, a property of a user and extrinsic data.

26. (Previously presented): The system of claim 25 further comprising:

     a property log operative to store information regarding at least one of: a property of the item, a property of the user and extrinsic data.

27. (Original): The system of claim 26 being temporally sensitive such that information stored in the property log is updated over time.

28. (Original): The system of claim 27 being temporally sensitive such that at least one of: a determined probability, value density and inference drawn therefrom is updated over time.

29. (Previously presented): The system of claim 28 further comprising:

     a learning system adapted to learn how to adjust the inference system based upon at least one of: updated log information, determined probabilities and value densities.

30. (Original): The system of claim 24 further comprising:

     an interactive user interface (UI).

31. (Original): The system of claim 30 wherein conditions are utilized by the probability component and inference system, the UI including a selection element operative to allow a condition to be enabled/disabled.

32. (Original): The system of claim 31 wherein the UI includes an entry element operative to allow a condition to be configured.

33. (Previously presented): A system operable to determine which of a plurality of items to store actively comprising:

a probability component adapted to determine respective probabilities that the items will be accessed;

a cost-benefit component adapted to determine respective value densities as a function of the respective probabilities and sizes of the items;

an inference system adapted to infer whether items should be actively stored based upon at least one of: respective probabilities and value densities; and

an optimization component operable to determine which items to store actively based upon the respective value densities of the items and an amount of active space available.

34. (Previously presented): The system of claim 33 wherein the probability component is adapted to determine the respective probabilities of the items based upon at least one of: respective properties of the items, a property of a user and extrinsic data.

35. (Previously presented): The system of claim 34 further comprising:

a property log operative to store information regarding respective properties of items, a property of the user and extrinsic data.

36. (Original): The system of claim 35 being temporally sensitive such that information stored in the property log is updated over time.

37. (Previously presented): The system of claim 36 being temporally sensitive such that determined probabilities, valued densities and inferences drawn therefrom are updated over time.

38. (Previously presented): The system of claim 37 further comprising:

a learning system adapted to learn how to adjust the inference system based upon at least one of: updated log information, determined probabilities and value densities.

39. (Previously presented): A method to determine which of a plurality of items to store actively comprising:

    determining respective probabilities that the items will be accessed;

    determining respective value densities as a function of the respective probabilities and sizes of the items;

    inferring whether items should be actively stored based upon at least one of: respective probabilities and value densities; and

    determining which items to store in active space based upon the respective value densities of the items and an amount of active space available.

40. (Previously presented): The method of claim 39 further comprising:

    determining the respective probabilities of the items based upon at least one of: respective properties of the items, a property of a user and extrinsic data.

41. (Original): A computer-readable medium storing computer-executable instructions adapted to perform the method of claim 39.

42. (Previously presented): A system operable to infer whether an item will be accessed once or more than once comprising:

    an inference system operable to infer whether an item will be accessed once or more than once based a comparison of properties of the item to properties of other items that have been accessed once, the inference system being operable to analyze properties of a user and extrinsic data.

    a probability component adapted to determine the probability that the item will be accessed; and

    a cost-benefit component adapted to determine a value density of the item as a function of the determined probability and size of the item, the inference system operable to compare at least one of: the determined probability and value density to probabilities and value densities of items that have been accessed once.

43. (Previously presented): A method to infer whether an item will be accessed once or more than once comprising:

comparing properties of the item to properties of other items that have been accessed once;

analyzing properties of a user and extrinsic data;

determining a probability that the item will be accessed;

determining a value density of the item as a function of the determined probability and size of the item; and

comparing the determined probability and value density to probabilities and value densities of items that have been accessed once.

44. (Original): A computer-readable medium storing computer-executable instructions adapted to perform the method of claim 43.

45. (Original): An interactive user interface (UI) adapted to display a condition that affects how a decision is made regarding the storage of an item comprising:

a selection element operable to allow a condition to be enabled/disabled; and

an entry element operable to permit a condition to be configured.

-9-